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ANALYSIS OF A COMPANY'S ACTIVITY IN TERMS OF DISTRIBUTION COSTS

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Purpose: Running a business is correlated with incurring costs. These are related to the management of resources in enterprises, which is why they must be constantly analysed and controlled. Based on cost information, certain management decisions are made. The aim of the article is to present basic issues concerning the functioning of distribution costs in an enterprise.
Design/methodology/approach: An analysis of a company's activities in terms of distribution costs was conducted. In addition, the article defines the logistical indicators and measures of an enterprise and presents expenses incurred for training in specific years.
Determinations: The article presents the allocation of primary distribution costs, which are divided into storage costs, transport costs, inventory maintenance costs, and administrative costs through conducting an interview in the enterprise.
Originality/Value: The results of the study can be used in the company's strategic distribution decisions.

Keywords: distribution logistics, logistics costs, enterprise.

1. Introduction

Currently, distribution policy is an area within which important decisions are made in an organization. Over the years, this process has been significantly intensified, due to the fact that an enterprise's financial results and position on the market depend on the decisions made in the field of its distribution policy (Bełch, 2016a, pp. 14-16). Intense consideration of the issue of distribution has led to finding many different interpretations and the establishment of different theoretical concepts of this process (Crochet, 2014, p. 512). Distribution is a particularly complex area. The purpose of this phenomenon, which is one of the most important elements of marketing impact on the market, is to overcome various barriers separating the manufacturer from the final buyer.

Distribution logistics are activities related to the goods and services flow at a specific time and place. All tasks carried out within the distribution system and its individual subsystems generate costs. In turn, logistics costs are the basic method of quantitatively measuring the effectiveness and efficiency of all company processes. Cost management requires looking at the phenomena that cause costs, as well as focusing on increasing cost efficiency.

2. Analysis of a company's activities in terms of distribution cost factors

A manufacturing company is presented as an entity conducting business activity, the main purpose of which is to achieve profit and meet the needs of its customers. Each enterprise operating on the market has to bear certain internal and external costs. It should be noted that companies try to reduce costs, but often external costs are minimized to the detriment of other costs (Ślusarczyk, 2011, pp. 14-16). In the literature "cost is the consumption of resources expressed in money, arising from the implementation of activities related to achieving the organization's objectives, in an enterprise it is the consumption of resources during the production and sale of products" (Fertsch, 2006, p. 189). One of the main goals of logistics is to minimize the product flow cost, increase the company's profit, and create a satisfactory level of customer service (Gołębmbska, 2006, pp. 36-37). Companies very often point to stocks as a cost-generating factor, but it should be noted that they are inextricably linked to the production process. The structure of logistics costs in manufacturing enterprises can be presented as follows (Fechner, Szyszka, 2006, pp. 186-189).

When analysing a production plant's value and cost structure, all the smallest details should be taken into account. Starting with revenues, number of employees, products, etc., providing information on the size of the business, through other studies facilitating the analysis of cost factors of distribution, namely the results regarding individual costs:

- transport, considering additional transport costs,
- maintaining inventories, i.e. the costs of accumulation and ageing of material inventories,
- product storage, as well as the costs of packaging, equipment, energy, computer software,
- administration, i.e. costs related to mandatory product controls, material flow, as well as computer hardware and software, and personnel involved in logistics and distribution processes,
- lost benefits, obtained through calculating costs at the specific product level.

The method of calculating costs in the discussed production plant depends on several factors. In order for accounting employees to accurately manage documents, it is necessary to know the controlling areas and products, as well as individual fractions. There are two steps to

this process. The first is the responsibility of specific substantive cells that develop contracts and orders. Their tasks include the initial documentation implementation. The following step, however, is considered to be the work of an employee from the accounting department, namely the posting of a document that was initially implemented. The work of these people gives the opportunity to control all costs incurred by the company. Thus, the figure below shows what share is occupied by the basic costs.

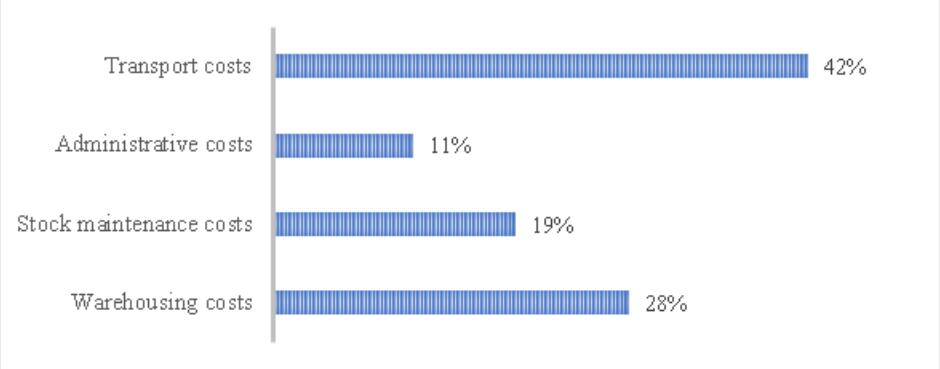

Figure 1. Allocation of basic distribution costs in the enterprise.

Source: Own study based on the company's source materials.

Based on the above chart, it is clear that the largest expenses incurred by the company are related to transport costs. Such a high percentage (42%) is mainly comprised of costs related to transport services, the costs of maintaining cars, the consumption of materials, fuels and energy related to the operation of these cars, the remuneration for drivers, as well as the repair and maintenance costs of means of transport. For the sake of comparison, Figure 2 will show the difference in incurred expenses related to the basic distribution costs by the plant over a period of 3 years.

From Figure 2 it can be concluded that, despite the passage of years, transport costs still constitute the largest sum of total distribution costs - on average they account for 40.6%. It is certainly not possible for administrative costs to exceed the cost limit of maintaining stocks, as the former represent 11% for 2019, 12% for 2020 and 8% for 2021 respectively, while the costs of maintaining stocks represent 19%, 12% and 21% respectively. Storage costs change in relation to the costs of maintaining inventories, i.e. when the costs of collecting inventories decrease, the cost of their storage also decreases. The above figure indicates an even spread of distribution costs, which is important when operating, among others, a production plant. However, if certain indicators were to change dramatically, managers would have to find the reason for this and then take steps to regulate this situation.

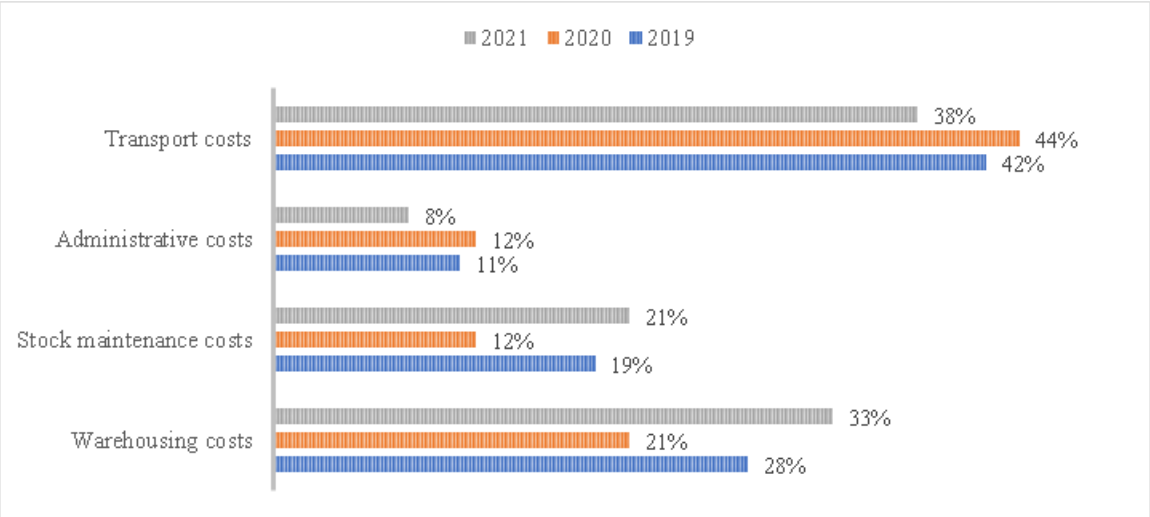

Figure 2. Distribution costs incurred by the company in 2019-2021.

Source: Own study based on the company's source materials.

Table 1 below shows a detailed breakdown of transport costs per year. Transportation costs include the operation of cars, their maintenance and repairs, fees, insurance, as well as compensation for employees, transport services, motorway tolls and parking lots. The table shows that the costs of repairing means of transport are the lowest (only 5% of the total costs), because at the turn of one year they are definitely lower than the others. The cost of car maintenance is just behind the cost of repairs. They account for 10% of transport costs and are also not among the highest, as insurance fees are paid only once a year. The above figure indicates that 15% of the total transport costs are related to transport services - these include motorway tolls, vignettes. The basic costs that overlap with transport-related costs are the 30% employee costs, and above all – costs related to fuel consumption, i.e. 40% of the total transport costs.

Table 1.

Detailed breakdown of transport costs in the enterprise

Exploitation	Wages and salaries	Transport services	Maintenance	Repairs
40%	30%	15%	10%	5%

Souce: Own study based on the company's source materials.

Based on the figure presented earlier, it should be noted that the next area associated with high costs incurred by the company, are costs related to product storage. These costs include stockpiling warehousing, property taxes including rent, maintenance costs (heating and lighting), costs of repairs, maintenance of buildings and maintaining the safety of warehouse space, as well as employee remuneration. In view of this, the figure below will present, similar to transport costs, a detailed breakdown of the total storage costs incurred by the company in the years 2020-2021.

The following shows that storage costs differ little from each other over a two-year period. The highest costs are related to the storage of products, they amounted to 38% in 2020 and 32% in 2021 of all storage costs. However, they may change due to the condition of the product, as finished products are often stored in the open air, which reduces all costs. Therefore, it is concluded that storage costs are also deeply related to the stock maintenance costs. The material storage costs are directly followed by costs related to employee remuneration, which constitute 22% (2020) and 26% (2021) of all costs. The costs associated with all kinds of fees - rent, lighting, heating and other costs of maintaining the warehouse space are comparable. These constituted 15% to 20% of all costs in 2020-2021. It is clear from the above figure that the lowest costs are associated with any repairs being made. In 2020, the company spent only 5% on building repair and maintenance, while in 2021 that figure was only 2% more.

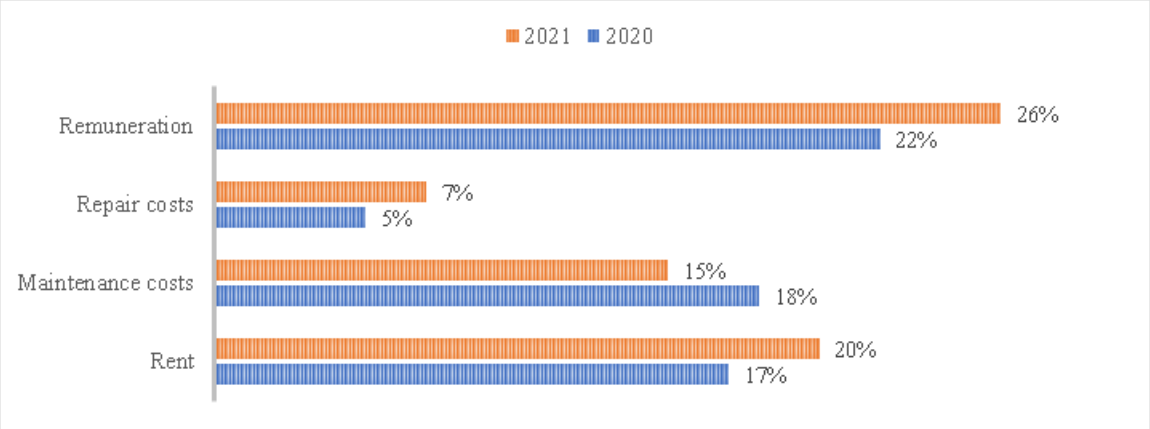

Figure 3. Breakdown of total storage costs in 2020-2021.

Source: Own study based on the company's source materials.

It is worth noting that the costs of storing finished products are much lower than the total costs. Expanded clay aggregate (LECA) in large quantities is accumulated in the open air, allowing the plant to save on the use of storage space, and thus reducing all fees.

Additional costs in the area of distribution borne by the company comprise costs related to the mandatory periodic training for employees and the so-called company-wide costs, which include protective clothing, medical care and first aid. Employees such as drivers, warehousemen, marketers, managers, or production personnel must undergo periodic training. The related expenditure is high, due to the number of company employees, as well as the frequency of training for individual departments. The figure below shows the company's expenditure on staff education and courses in 2017-2021 in PLN.

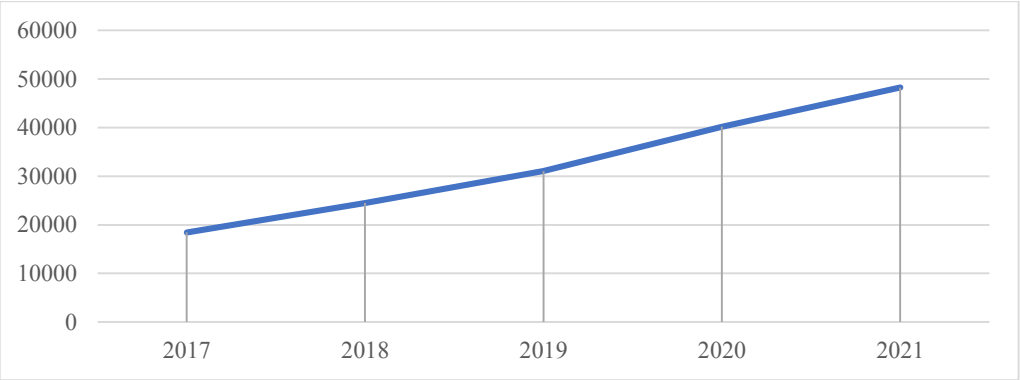

Figure 4. Company expenditure on training for distribution employees in 2017-2021.
Source: Own study based on the company's source materials.

The above chart shows the expenditures allocated to employee training. Over the five year period, these expenditures increased from year to year. Comparing 2017 to 2021, the difference is significant and amounts to almost PLN 30,000. In 2017, the company paid PLN 18,452 for training, and in 2021 it paid almost three times as much - nearly PLN 48,500. Between these years, expenditures grew by about 10 thousand over a year, namely in 2010 they amounted to almost 25 thousand PLN, in 2011 they amounted to just over 31 thousand PLN, and in 2012 nearly 42 thousand PLN. The annual increase in employee training expenditures may be caused by inflation and technological development, and thus the need to increase the knowledge and awareness of employees regarding behaviour in emergency situations.

3. The Company's logistic indicators and measures

Distribution logistics involves linking all activities related to supplying the customer with finished products. The elements of distribution include the sales method, service and sales path (Ficoń, 2019, pp. 151-153). Distribution connects the logistics market with the recipient market. As part of the measurement taking into account the economic aspect of distribution, individual measures are distinguished (Twaróg, 2006, pp. 58-60).

Assessment of the company's distribution system uses indicators that encompass warehouse management combined with transport. Another important indicator are the stock losses created during accumulation of production and its transport.

Table 2.
Measuring instruments for distribution economics

<table>
<tr><th colspan="4">Measures</th></tr>
<tr><th>structural, framework</th><th>of productivity</th><th>of economy</th><th>qualitative</th></tr>
<tr><td>number of customers, deliveries per unit of time and levels, and storage locations</td><td>shipping and ordering productivity</td><td>costs of fulfilling a recipient's order and order distribution</td><td>percentage share of defective deliveries, delays, complaints</td></tr>
<tr><td>average sales per customer, distance between storage levels, and distance between warehouse and customer</td><td>order transport time</td><td rowspan="2">share of order performance costs in sales and shipping costs
ratio of company transport costs to rented transport costs</td><td rowspan="3">average delivery time
volume of supplementary deliveries
average delivery time</td></tr>
<tr><td colspan="2">order format</td></tr>
<tr><td colspan="3">costs of shortages
order and external transport performance</td></tr>
<tr><td colspan="4">distribution worker contribution</td></tr>
</table>

Source: Own study based on the company's source materials.

Table 2 is designed to assess the economic aspect of distribution. The measures are divided into four main sections related to the construction of the company's distribution, productivity, economy, as well as quality.

Cost accounting in enterprises may vary. Below is a diagram that shows the methods of recording, indicating which method the company's operations are based. Table 3 shows that the company, for the purpose of recording cost, is limited to only the method of cost accounting. It omits the accounting of individual direct and indirect costs, the costs of specific products and services, as well as the ABC method.

Table 3.
Method of recording costs

Recording method
Cost accounting
Division of costs into direct and indirect
Calculation at the product and service level
Cost calculation using the ABC method

Source: Own study based on the company's source materials.

Cost-generating factors include the relationship with the customer, the method of customer communication, the service sharing the distance, as well as the frequency and size of orders placed by the customer. In order to maintain a good customer relationship and acquire regular consumers, the company strives for the highest customer service quality. All these factors indicate the amount of incurred costs.

Table 4 presents what in the process of order placement by a customer influences the amount of costs. It follows from the above that the best solution for the company would be a large, standard order, placed by a customer not too far from the production plant, using an electronic form of communication, and a short payment cycle. In cost reduction, it is important that the customer accepts the prices proposed in offers and price lists, rather than agreeing the price through the negotiation process or tenders. Placing small and frequent orders, similar to a product quality guarantee, increases transport costs.

Table 4.
Customer cost drivers

Low costs	**High costs**
standard orders	special orders
large orders	small, frequent deliveries
shorter distance to the customer	greater distance to the customer
classic selling procedures (offer/price list)	pre-sales services (negotiations/ advice/tender)
no pre-sales service	training, servicing, warranty
electronic communication	traditional communication
short payment chain	long payment chain

Source: Own study based on the company's source materials.

In order to calculate the logistics costs needed to assess the production process situation and the related costs, the company uses appropriate formulas.

4. Summary

Costs are one of the most important economic categories related to a company's functioning. Their appropriate division and accounting allow correct determining the company's financial result in a given period. Familiarity with the costs, knowledge about them, learning their essence and economic thread ensure effective and efficient enterprise management (Geyskens, Steenkamp, Kumar, 2006, pp. 519-543; Müller, Aust, 2011, pp. 1287-1330). Calculating distribution costs, i.e. the sum of all costs related to the physical flow of products from the manufacturer to the end customer, i.e. customer service, orders, transport, warehouse space maintenance and inventory maintenance, is a difficult process, although very important in proper company functioning. Costs are interdependent, which means that deciding to reduce costs in one particular sphere may result in increased costs in another sphere, and thus in an increase in total costs.

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